



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|--------------------------|---------------------|------------------|
| 10/570,593 | 03/06/2006 | Lionello Morando Babbini | BABBIN12 | 2966 |

1444 7590 02/07/2008
BROWDY AND NEIMARK, P.L.L.C.
624 NINTH STREET, NW
SUITE 300
WASHINGTON, DC 20001-5303

| |
|----------|
| EXAMINER |
|----------|

NGUYEN, JIMMY T

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3725

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

02/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/570,593

Applicant(s)

BABBINI, LIONELLO MORANDO

Examiner

JIMMY T. NGUYEN

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/6/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/6/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

Receipt is acknowledged of an Information Disclosure Statement (I.D.S.), filed March 06, 2006, which I.D.S. has been placed of record in the file. An initialed, signed, and dated copy of the form PTO-1449 is attached to this Office action.

Specification

The abstract is objected to because it includes the form and legal phraseology often used in patent claims, such as "means" and "said". Therefore, the word "said" in the abstract should be corrected. Additionally, the abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, **apart from any other text** (emphasis added).

The disclosure is objected to because of the following informalities: Page 4, line 16 is objected to because it is improper to refer to a claim in the specification. The specification is a stand alone document and is not read in light of the claims. Appropriate correction is required.

Claim Objections

Claim 1 is objected to because of the following informalities:

Regarding line 27, the word "adiacent" appears to be a typo error, and it should be changed to -- adjacent --.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, lines 7-8, the recitation “each helical structure” lacks clear antecedent basis because it is unclear whether this helical structure is referring to the helical structure as claimed in line 7 or to a different helical structure. If the applicant is intended to claim the same “helical structure”, it is suggested that this recitation should be changed to “each of said helical structures”.

Regarding claim 1, line 8, there is no antecedent basis for the limitation “the opposite direction” in the claim.

Regarding claim 1, line 19, the recitation “each box-like helical structure” lacks clear antecedent basis because it is unclear whether this helical structure is referring to the helical structure as claimed in line 7 or to a different helical structure. If the applicant is intended to claim the same “helical structure”, it is suggested that this recitation should be changed to “each of said box-like helical structures”.

Regarding claim 1, line 26, there is no antecedent basis for the limitation “the pitch” in the claim.

Regarding claim 8, lines 3-4, there is no antecedent basis for the limitation “the direction of advancement” in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Christiansen (WO 03/031166).

Regarding claim 1, Christiansen discloses a screw press comprising: a pair of adjacent rotating shafts (5, 6), box-like helical structures (fig. 3), a perforated filter case enclosing the helical structures as an exact fit ((fig. 1), a loading hopper (3), a discharge aperture (4), a collection sump (17), wherein each of the helical structure comprises a helix (8) and a helical element (10), the helical element formed a helical interspace (21) with the outer surface of the shaft (fig. 3) and comprising at least one perforated surface (fig. 3), the perforated surface having a length along an axis of the shaft (fig. 1), which at every point is less than a pitch (fig.1) of the helix by an amount sufficient to leave free a channel (12 or 13) adjacent to the helix in which the helix of the adjacent shaft is received (fig. 3).

Regarding claim 2, the shaft has a cylindrical outer surface (fig. 2).

Regarding claim 3, Christiansen discloses a diameter on the right side of the shaft as shown in figure 1 is smaller than a diameter on the left side of the shaft as shown in figure 1, and thus Christensen discloses the shaft has conical outer surface.

Regarding claim 4, Christensen discloses a lot of space is available between the perforated surface and the cage and between the perforate surfaces of the helical structure.

Art Unit: 3725

Therefore, the perforated surface "can be" enveloped by a conical surface. Note that the recitation "can be" is not a positive limitation; therefore, the perforated surface as disclosed by Christensen "can be" enveloped by a conical surface for the reason as given above.

Regarding claim 5, the helix "can be" enveloped by a cylindrical surface (figs. 1 and 2).

Regarding claim 6, Christiansen discloses a diameter on the right side of the helix as shown in figure 1 is larger than a diameter on the left side of the helix as shown in figure 1, and thus Christensen discloses the helix "can be" enveloped externally by a conical surface.

Regarding claim 7, the helix is formed by a hollow box like structure (fig. 3) communicating with the helical interspace (fig. 3) and the helical interspace (21) presents at least one perforated side (fig. 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christiansen in view of Babbini (EP 0930152 A1).

Regarding claim 4, in the event that the Applicant disagrees with the rejection of claim 4 under 35 USC 102 (b) above, the following rejection is applied to claim 4. Although Christiansen discloses the cage is conical, the perforate surface of the helical element is not enveloped by a conical surface. However, the patent to Babbini can be applied to teach that is old

Art Unit: 3725

and well known in a double screw pressing art to provide a helical element with a surface enveloped by a conical surface (fig. 2) and the helical element is positioned in a conical perforated filtering cage (3 and 4) in order to produce both the advancement of the material along the screws in an axial direction and its gradual compression (para. 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the perforated surface of Christiansen to be a conical surface, as taught by Babbini, in order to produce both the advancement of the material along the screws in an axial direction and its gradual compression, thus improve the pressing of the material.

Regarding claim 8, Christiansen does not disclose a pitch decreasing in a direction of advancement of the material during pressing. However, the patent to Babbini, also in a screw pressing art for dehydrating material, teaches that it is old and well known to provide a double screw press with screws having screw pitches that are decreasing in a direction of advancement of material (fig. 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Christiansen with the type of screws having screw pitches that are decreasing in a direction of advancement of material, as taught by Babbini, since such type of screws are old and well known in the screw pressing art for dehydrating material.

Conclusion

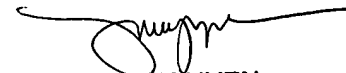
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art listed on the attached PTO 892 are cited to show relevant double screw press.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JIMMY T. NGUYEN whose telephone number is (571)272-4520. The examiner can normally be reached on Monday-Thursday 7:30am-5:00pm with alternating Friday 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272- 4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JTNguyen
February 02, 2008


JIMMY T. NGUYEN
PRIMARY EXAMINER